

ABSTRACT

A control system for a continuously variable transmission and continuously variable transmission wherein such is utilised, includes a drive belt located between pulley discs of a first pulley and of a second pulley, the pulleys being rotatable at a rotational speed and being operable by a first and a second piston/cylinder assembly respectively. The control system controls the respective cylinder pressure in the first and second piston/cylinder assemblies, at least based on a torque signal representing the torque to be transmitted by the transmission and two speed signals representing the rotational speeds of the first and second pulley, for clamping the drive belt between the discs thereby enabling torque transmission between said pulleys and the drive belt.

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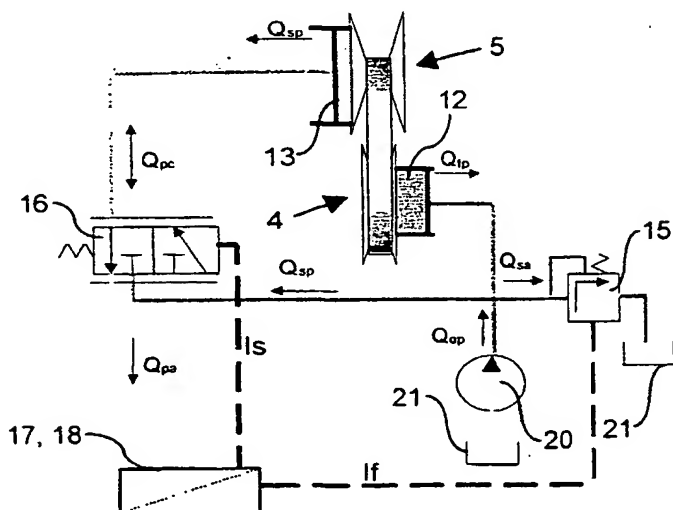
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(54) Title: CONTROL SYSTEM FOR CONTINUOUSLY VARIABLE TRANSMISSION AND CONTINUOUSLY VARIABLE TRANSMISSION WHEREIN SUCH IS UTILISED



(57) Abstract: The invention provides for a control system (15, 16, 17, 18, 19, 20, 21) for a continuously variable transmission and continuously variable transmission wherein such is utilised, the continuously variable transmission comprising a drive belt (1) located between pulley discs (8, 9, 10 and 11) of a first pulley (4) and of a second pulley (5), the pulleys (4, 5) being rotatable at a rotational speed and being operable by means of a first and a second piston/cylinder assembly (12, 13) respectively, and the control system (15, 16, 17, 18, 19, 20, 21) controls the respective cylinder pressure (Pf or Ps) in said first and second piston/cylinder assemblies (12, 13), at least based on a torque signal (Tt) representing the torque to be transmitted by the transmission and two speed signals (Nf, Ns) representing the rotational speeds (Nf, Ns) of said first and second pulley (4, 5), for clamping said drive belt (1) between said discs (8, 9, 10 and 11) thereby enabling torque transmission between said pulleys (4, 5) and

said drive belt (1). During operation of the transmission the control system (15, 16, 17, 18, 19, 20, 21) determines a minimum cylinder pressure (Pf,min, Ps,min) for each of said first and said second piston/cylinder assembly (12, 13) on a continuous basis, at which minimum cylinder pressure (Pf,min, Ps,min) said torque transmission occurs virtually without mutual movement of the drive belt (1) and the respective pulley discs (8, 9 and 10, 11). Subsequently the control system (15, 16, 17, 18, 19, 20, 21) controls the cylinder pressures (Pf and Ps) to a level which is at any time equal to, or higher than, the respective minimum cylinder pressure (Pf,min, Ps,min) for each of said first and said second piston/cylinder assembly (12, 13).